DOCUMENT RESUME

ED 145 871 JC 770 486

AUTHOR Bennett, Lula M.
TITLE A Comparative Study of the Application of Learning Theories as Perceived by Faculty and Students.
PUB DATE Mar 77
NOTE 60p.; Ed.D. Practicum, Nova University ; Best copy available

EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS *Classroom Techniques; College Faculty; College Instruction; Community Colleges; Educational Research; *Junior Colleges; *Learning Theories; Perception; Questionnaires; Social Sciences; *Student Evaluation of Teacher Performance; Teacher Evaluation; *Teaching Methods; Teaching Skills; Teaching Styles

ABSTRACT

To test the similarity of student and instructor perceptions of the learning approaches used by particular instructors in the classroom, teachers and students (n=138) of ten social science classes at Valencia Community College (Florida) responded to a questionnaire. Items tested the instructors' application of the learning theories of Pavlov, Thorndike, Hull, Skinner, Guthrie, Tolman, and Mower. Student responses were aggregated and compared with the teacher's response to determine whether the teacher's perception of his instructional approach matched the students' perceptions. Results indicated a wide disagreement between student and instructor, and a strong alignment of instructors with the learning theories of Pavlov and Hull. A repetition of the study was recommended, to be followed by an instructor self-evaluation based on responses, and a third repetition after several semesters of teaching in which instructors could modify their classroom conduct. The questionnaire and information on its development are appended. (RT)

**********
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
**********

ED145871

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Lula M. Bennett

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

# A COMPARATIVE STUDY OF THE APPLICATION OF LEARNING THEORIES AS PERCEIVED BY FACULTY AND STUDENTS

by
Lula M. Bennett

BEST COPY AVAILABLE

JC 770 486

A PRACTICUM PRESENTED TO NOVA UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF EDCUATION

March, 1977

# A B S T R A C T

A Comparative Study of the Application of
Selected Learning Theories as Perceived
by Faculty and Students

by Lula M. Bennett

In this study the perceptions of instructors relating to classroom behavior as they pertain to selected learning theories were compared to the perceptions of that instructor's behavior by his students to determine whether significant differences in perceptions exist. Every instructor has a personal philosophy of how learning occurs based on his understanding of learning theory. Certain classroom behaviors result from a personal philosophy. If the students are not perceiving the classroom behavior of the instructor as he sees it, he may not be utilizing a valuable teaching-learning tool.

Questionnaires pertaining to various learning theories were given to each faculty member of the Social Science Department for completion by the instructor and then by his students. The anonymity of both the instructor and the students was protected.

A statistical comparison of ten instructor's ratings was compared to the rating of that instructors students' perceptions. A total of 138 students were involved in the student ratings. Students per instructor ranged from 23 to 58. The t-test was used to determine the significance of these comparisons.

Results of these comparisons indicate a wide variety of perceptions between students and teachers.

The questionnaire and procedures developed may be of use to instructors in other departments as well as in other colleges. This study can be used to benefit instructors and students. The instructor may, as a result of these findings, modify his teaching behavior in order to become more effective in conducting his classes. The students will assist in improving their own classroom environment through effective feedback to the instructor.

TABLE OF CONTENTS

LIST OF TABLES . . . . . ii

INTRODUCTION . . . . . 1

BACKGROUND AND SIGNIFICANCE . . . . . 2

PROCEDURE . . . . . 6

RESULTS . . . . . 10

DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS . . . . . 28

FOOTNOTES . . . . . 31

BIBLIOGRAPHY . . . . . 33

APPENDIXES

A. DEVELOPMENT OF THE QUESTIONNAIRE

B. QUESTIONNAIRE

C. FACULTY LETTER

D. LEARNING THEORY ITEM NUMBERS AND THEORISTS

# LIST OF TABLES


Table — Page

1. Group I - Questionnaire Items: Instructor/Student Means Compared . . . . . 12
2. Group II - Questionnaire Items: Instructor/Student Compared . . . . . 13
3. Group III - Questionnaire Items: Instructor/Student Means Compared . . . . . 14
4. Group IV - Questionnaire Items: Instructor/Student Means Compared . . . . . 15
5. Group V - Questionnaire Items: Instructor/Student Means Compared . . . . . 16
6. Group VI - Questionnaire Items: Instructor/Student Means Compared . . . . . 17
7. Group VII - Questionnaire Items: Instructor/Student Means Compared . . . . . 18
8. Summary of Responses of Individual Instructors . . . . . 19

# INTRODUCTION

For every instructor walking into a classroom, the available options for teaching to produce learning are many. There is always the accustomed way, the way the instructor has been taught and, therefore, teaches. Often this is done with cool assurance that this is the best way; sometimes there are vague misgivings. There are also things the instructor has seen or heard about and which he is applying to his classroom teaching. Perhaps there are things he has invented in his own mind and is putting into practice. He has some knowledge of theory, but often it is a rather misty realm, not faced up to, not much respect. After all, there is many a theorist whose theories apparently conflict. But having explored the realm of learning theory, he has found some gold and silver although he may not know this. He may not be consciously aware that he is doing certain things, behaving in a particular way in class, because he has developed a personal philosophy about how people learn.

However, each instructor perceives himself behaving in certain ways because he believes that by his actions or behavior the student will somehow be different than he was before the instruction. The instructor provides learning experiences, of which he is a part, with the intent that the student will then be a modified person-modified in knowledge, in attitude, in belief, and in skill.

But the question is: does the student perceive the instructor's behavior in his classroom in the way the instructor wishes his behavior to be perceived? This study attempts to determine whether there is a significant difference in the Valencia Community College's Social Science

Department instructors' perception of their application of principles of learning theory as demonstrated by their actions in class and the perception of these classroom behaviors by their students.

In the Syllabus of Learning Theory and Applications, one of the basic course requirements states that the participant should demonstrate skill in the use of assessment techniques designed to facilitate learning.[1] An analysis of feedback from students and instructors regarding the application of learning theories in the classroom will enable the instructor to make adjustments in his classroom behavior if changes are desirable.

## BACKGROUND AND SIGNIFICANCE

A major claim to popularity in the community college has been the focus on teaching. This has been expected by the public and by those state officials upon whom these institutions depend for financial support. Educational literature did not provide, for the most part, a definitive picture of this focus, nor did it yield an assessment of what was actually being done in the classrooms. An extensive search suggested a need for information on student and faculty perceptions of the community college classroom teaching and learning environment.

Even though there were no studies identical to the current project, the need for such a study was indicated from statements and findings of a variety of articles which were indirectly related. In considering attributes to be used to produce an effective learning climate, it appeared important that specific attention be given to the variety of learning theories.[2] Teaching style has been greatly influenced by the individual instructor's perception of how students learn. Naftulin, Ware, and Donnelly strongly suggested that style is more important than

context for a variety of needs the instructor must meet. These needs can be met only the use of appropriate teaching methods based on valid learning theories.[3] Teaching style has been assumed to be a powerful influence on student performance. Gibbs, in studying classroom behavior, was able to identify twenty-five significant behaviors related to student satisfaction, but he did not relate these directly to learning theory.[4] There has been a marked reorientation in scientific thinking about the most effective ways to help people learn; according to Mayo, however, research has not correlated the effect of classroom behavior and learning theory.[5] By analyzing differences in perceptions of instructor behavior and noting differences, improvement in the instructional climate can be effected by reassessment of classroom behavior. Professionally, teachers are engaged continuously in evaluating students. But how often does a teacher evaluate his own methods?[6] If the instructor has been practicing certain behaviors because he believed these actions would enable the student to learn better, would it not be worthwhile to know if he were successful?

Literature reveals that when technique or teacher functioning has been studied, the emphasis has been on individual techniques, patterns or techniques, teacher-pupil interaction and effects of teaching on pupil achievement and functioning.[7] For example, there are studies of a single technique such as praise or criticism, but this research was aimed at the improvement of academic performance.[8] The actual perceptions of a teacher in action by his students have not been researched. Such research should lead to better teaching planning. Planning makes a good teaching possible, the lack of planning leads to haphazard classroom performance.[9] It becomes the task of instructors to find the means which will enable students to master the subject under consideration.[10] Many things affect the

instructor's classroom behavior. Those who actually teach derive their instructional behavior from a variety of sources, for example, their learning experiences, social class affiliation, personal needs, and other factors, most of which have not been researched.[11] Many instructors may not see their classroom behaviors as the students perceive it, although observation indicated the instructor's classroom behavior to be a relevant variable affecting success of student learning.[12] Therefore, it is most important that the instructor be able to correctly assess the success of his classroom behavior. The instructor is not a passive consultant standing on the elbow of the student. Through his behavior, he is an active participant in the learning process.

There are skills and attitudes which are directly related to theories of learning which affect good teaching. These skills could be learned if they are not already practiced.[13] It is important that the instructor know how his skills and attitudes in the application of his personal philosophy regarding learning theory are being received by his students. Only then can he modify his behavior in order to reach his goals he has established for each learning experience he presents for his students.

As pointed out by Geis, there was general agreement that feedback from students was important in many, if not all, learning situations. Probably no one feature of a learning situation has been more important or more badly designed than feeeback.[14] The instructor has been strongly characterized as a critical variable, with a complex set of behaviors, in most of the present instruments given to students for evaluative purposes.[15] In a survey of 411 students at Harcum, sixty-nine percent (69%) thought student input should be considered in varied aspects of course

evaluation.[16] Whitfield and Brammer suggested that college educators should encourage feedback from students on the teaching-learning at strategic intervals with the purpose of revising instructional strategies.[17] In an article dealing with changes in instructional programs and ways to effect changes, Bailey suggested consideration of needs and opinions expressed by students and introduction of new instructional techniques and aids.[18] A number of reports indicated that student feedback is of value in effecting change. Marsh reported results which support the validity and usefulness of student input to upgrade instructional quality.[19] Miller verified improved performance as a result of feedback from students.[20] If the instructor would value student feedback and utilize it, the result may be a shift of emphasis of instruction from lecturer to diagnostician. Students should be given an opportunity to improve instruction.[21] Effective teaching calls for long and detailed examination of a course coupled with rigorous objective specification and verification.[22] Procedures as outlined in this study provide the instructor with insight into student perception compared with his own and afford him an opportunity to reevaluate his teaching in order to further implement learning. The investigation reported here may be applicable to other courses offered at Valencia Community College, as well as at other schools.

## PROCEDURE

For purposes of this study the following terms are identified:

Teaching Style - Teacher attitudes toward student learning based on the teacher's personal philosophy as it relates to learning theories.

Feedback - Knowledge about one's performance obtained by questioning those who observe that performance.

Learning Theory - Principles concerning the most effective way to achieve knowledge or skill. The theory sets up criteria and states the conditions for meetings these criteria.

Session III B - One of two seven week sessions into which summer is divided.

The limitations of this study are as follows:

1. Because the study is based on the findings obtained from one department, the results may not be valid for other departments and schools.
2. In spite of an effort to assure anonymity, some instructors and/or students may have tried to rate items as they feel they should be rated, rather than assess behaviors as they are actually perceived.

3. Even though effort was made to assure anonymity, some instructors may have felt threatened by the questionnaire and, therefore, refused to participate in the project.

The basic assumptions pertinent to this study are as follows:

1. A cooperative faculty-student endeavor of this type is of value because it has the potential of developing perceptual understanding of the instructor's classroom. This could motivate those involved to meet their respective responsibilities.
2. The weighted-rating scale developed for the questionnaire accurately indicated the degree to which the instructor's behavior is perceived.
3. Students, in spite of their lack of expertise in judging learning theories, are able to record their perceptions of the instructor's behavior in the classroom.
4. The instructor was able to fairly assess his own classroom behavior.
5. The questionnaire was a valid instrument for rating the instructor's behavior in the classroom based on a selected list of learning principles from seven learning theorists.

During the fourth week of summer session, IIIB, the questionnaires and IBM answer sheets were distributed to the twelve social science faculty members of Valencia Community College. In order to assure anonymity, each instructor received an envelope containing an alphabet letter which

was that faculty member's identification letter. This letter was used by both the faculty member and his students in place of names. The faculty member was made aware that a third party placed the letters in the envelopes and mixed them up so that identification of the faculty member and students was impossible.

Each faculty member received a list of steps to facilitate administration of the questionnaire. The procedure for returning the questionnaires was designed to protect the faculty member's identify. See Appendix B for a copy of the letter to the faculty members.

In an effort to reduce anxiety, the instructors and students received assurance that the questionnaire was not an evaluation of teaching ability; that there were no right or wrong answers. The participants were urged not to make moral judgements about the statements and rate only their perceptions of classroom behavior or actions of their instructor. These ratings were based upon actual observations in the classroom over a period of four weeks.

A total of ten instructors participated in the procedure as described. After the questionnaires were returned, a t-statistic was utilized to determine if a significant difference existed between the instructor's perceptions of his classroom behavior based on selected principles of learning and the perception of his classroom behavior by his students. The statistician consulted regarding the development of the questionnaire for this practicum suggested a rating scale of one to five (1 - 5).[22] (See the description of the development of the questionnaire and a copy of the questionnaire, Appendix A.) Computer program BDM 13D, Health Science Computing Facility, Department of Biomathematics, school of Medicine, University of California, Los Angeles Press was utilized to

determine the t-values. This available program results in a t-value rather than a z-value as was erronously stated in the practicum proposal. The t-test is an appropriate statistical test because numerical ratings are being compared instead of letter ratings.

Null Hypothesis, $H_o$: There is no significant difference between the mean score of the social science instructor's perceptions of his classroom behavior based on selected principles of learning and the mean score of that instructor's students perceptions of his behavior.

$H_a$: Reject $H_o$ if significant differences exist between the mean score of the social science instructors perceptions of his classroom behavior on selected principles of learning and the mean score of that instructor's students perceptions of his behavior.

Critical value for t-statistic used at the 0.05 level of significance.

## RESULTS

In calculating the t-score, the following formula was utilized to compute the mean:

$$M = \frac{\sum_{N=1}^{N=K} (Q_a + Q_b + Q_c + Q_d)}{K}$$

N = number
K = number of respondents
Q = questionnaire item-number

This formula has been used as the data treatment for each questionnaire group.

Items $Q_a$ through $Q_d$ were assigned as follows:

| Theorist | | Questionnaire Item Numbers |
|---|---|---|
| Pavlor | Evaluated by Group I | 1, 3, 10, 19 |
| Thorndike | Evaluated by Group II | 2, 11, 12, 20 |
| Hull | Evaluated by Group III | 4, 13, 14, 21 |
| Skinner | Evaluated by Group IV | 5, 15, 22, 24 |
| Guthrie | Evaluated by Group V | 6, 16, 23, 25 |
| Tolman | Evaluted by Group VI | 7, 17, 18, 28 |
| Mower | Evaluated by Group VII | 8, 9, 26, 27 |

These means were calculated as part of the computation of the t-score for each group. The program used for all data was Computer Program BMD 13D, Health Science Computing Facility, Department of Biomathematics, School of Medicine, University of California, Los Angeles Press. The t-test was an appropriate statistical test because numerical ratings

were compared rather than letter ratings. Additionally the number of responses to each question should approximate a normal distribution.

The following rating scale was used in interpreting tables 1-7 and in subsequent discussions:

| | | |
|---|---|---|
| Frequently agree with this statement | -A- | Transformed to a numerical value of 1 |
| Occasionally agree | -B- | Transformed to a value of 2 |
| Seldom agree | -C- | Transferred to a value of 3 |
| Never agree | -D- | Transferred to a value of 4 |
| No Opinion | -E- | Transferred to a value of 5 |

The means produced through the formula shown above produce an emperical range of values of approximately 4 (very strong agreement) to 14 (very strong disagreement).

A rating mean of $\leq$ 5 indicated the evaluator perceived the instructor as frequently applying that learning theorist's principles in the classroom.

A rating of 6-8 indicated the evaluator perceived that instructor as having occasionally applied that learning theorist's principles in the classroom.

A rating of 9-11 indicated the evaluator perceived that instructor as having seldom applied that learning theorist's principles in the classroom.

A rating of $\geq$ 12 indicated the evaluator perceived that instructor as never having applied that learning theorist's principles in the classroom.

Table 1

Group I (PAVLOV, QUESTIONNAIRE ITEMS - 1, 3, 10, 19)

| Instructor Identification Number | Instructor's Mean ($\bar{M}$) | Students' Mean ($\bar{M}$) | df | Calculated + | Critical + | Significant Difference (S.D.) No Significant Difference (N.S.D.) |
|---|---|---|---|---|---|---|
| A | 5.0 | 6.7 | 33 | 4.06(P=.001) | 2.04 | S.D. |
| B | 6.0 | 8.8 | 25 | 3.65(P=.01) | 2.06 | S.D. |
| C | 7.0 | 7.2 | 49 | 0.66 | 2.01 | N.S.D. |
| E | 7.0 | 6.7 | 58 | 0.96 | 2.00 | N.S.D. |
| G | 9.0 | 7.9 | 54 | 2.71 | 2.01 | S.D. |
| J | 6.0 | 7.9 | 31 | 3.49(P=.01) | 2.04 | S.D. |
| M* | 6.0 | 6.8 | 30 | 1.95 | 2.04 | N.S.D. |
| X | 6.0 | 6.1 | 26 | 0.43 | 2.06 | N.S.D. |
| Y | 8.0 | 8.0 | 25 | 0.09 | 2.06 | N.S.D. |
| P | 7.0 | 9.3 | 23 | 5.22(P=.001) | 2.07 | S.D. |

12.

Table 2

Group II (THORNDIKE - QUESTIONNAIRE ITEMS 2, 11 12, 20)

| Instructor Identification Number | Instructor's Mean ($\bar{M}$) | Students' Mean ($\bar{M}$) | df | Calculated + | Critical + | Significant Difference (S.D.) No Significant Difference (N.S.D.) |
|---|---|---|---|---|---|---|
| A | 10.0 | 9.8 | 33 | 0.25 | 2.04 | N.S.D. |
| B | 8.0 | 9.3 | 25 | 2.86 | 2.06 | S.D. |
| C | 7.0 | 10.2 | 49 | 8.62(P=.001) | 2.01 | S.D. |
| E | 6.0 | 8.6 | 58 | 10.0(P=.001) | 2.00 | S.D. |
| G | 7.0 | 9.3 | 54 | 6.14(=.001) | 2.01 | S.D. |
| J | 10.0 | 9.0 | 31 | 2.2 | 2.04 | S.D. |
| M | 6.0 | 8.5 | 30 | 5.76(P=.001) | 2.04 | S.D. |
| X | 8.0 | 8.1 | 26 | 0.28 | 2.06 | N.S.D. |
| Y | 11.0 | 8.6 | 25 | 3.83(P=.001) | 2.06 | S.D. |
| P | 6.0 | 8.3 | 23 | 3.57(P=.01) | 2.07 | S.D. |

Table 3

Group III (HULL, QUESTIONNAIRE ITEMS 4, 13, 14, 21)

| Instructor Identification Number | Instructor's Mean ($\bar{M}$) | Students' Mean ($\bar{M}$) | df | Calculated + | Critical + | Significant Difference (S.D.) No Significant Difference (N.S.D.) |
|---|---|---|---|---|---|---|
| A | 6.0 | 8.6 | 33 | 5.40(P=.001) | 2.04 | S.D. |
| B | 9.0 | 10.0 | 25 | 1.43 | 2.06 | N.S.D. |
| C | 8.0 | 8.6 | 49 | 1.17 | 2.01 | N.S.D. |
| E | 7.0 | 7.3 | 58 | 0.88 | 2.00 | N.S.D. |
| G | 6.0 | 8.4 | 54 | 6.83(P=.001) | 2.01 | S.D. |
| J | 7.0 | 7.87 | 31 | 1.85 | 2.04 | N.S.D. |
| M | 8.0 | 8.3 | 30 | 0.77 | 2.04 | N.S.D. |
| X | 8.0 | 6.0 | 26 | 4.27(P=.001) | 2.06 | S.D. |
| Y | 5.0 | 5.4 | 25 | 0.87 | 2.06 | N.S.D. |
| P | 5.0 | 6.7 | 23 | 4.10(P=.001) | 2.07 | N.S.D. |

14.

Table 4

Group IV (SKINNER - QUESTIONNAIRE ITEMS - 5, 15, 22, 24)

| Instructor Identification Number | Instructor's Mean ($\bar{M}$) | Students' Mean ($\bar{M}$) | df | Calculated + | Critical + | Significant Difference (S.D.) No Significant Difference (N.S.D.) |
|---|---|---|---|---|---|---|
| A | 5.0 | 10.0 | 33 | 10.39(P=.001) | 2.04 | S.D. |
| B | 7.0 | 9.0 | 25 | 2.80(P=.01) | 2.06 | S.D. |
| C | 9.0 | 8.5 | 49 | 1.40 | 2.01 | N.S.D. |
| E | 7.0 | 7.8 | 58 | 2.36 | 2.00 | S.D. |
| G | 9.0 | 9.5 | 54 | 0.97 | 2.01 | N.S.D. |
| J | 11.0 | 8.2 | 31 | 6.61(P=.001) | 2.04 | S.D. |
| M | 6.0 | 8.7 | 30 | 4.85(P=.001) | 2.04 | S.D. |
| X | 8.0 | 8.0 | 26 | 0.06 | 2.06 | N.S.D. |
| Y | 9.0 | 10.6 | 25 | 3.22(P=.01) | 2.06 | S.D. |
| P | 10.0 | 9.8 | 23 | 0.29 | 2.07 | N.S.D. |

15.

Table 5

Group V (GUTHRIE, QUESTIONNAIRE ITEMS - 6, 16, 23, 25)

| Instructor Identification Number | Instructor's Mean (M) | Students' Mean ($\bar{M}$) | df | Calculated + | Critical + | Significant Difference (S.D.) No Significant Difference (N.S.D.) |
|---|---|---|---|---|---|---|
| A | 7.0 | 9.4 | 33 | 5.07(P=.001) | 2.04 | S.D. |
| B | 9.0 | 9.2 | 25 | 0.31 | 2.06 | N.S.D. |
| C | 8.0 | 10.0 | 49 | 4.44(P=.001) | 2.01 | S.D. |
| E | 8.0 | 8.9 | 58 | 2.12 | 2.00 | S.D. |
| G | 14.0 | 10.7 | 54 | 8.18(P=.001) | 2.01 | S.D. |
| J | 10.0 | 9.2 | 31 | 1.62 | 2.04 | N.S.D. |
| M | 6.0 | 9.8 | 30 | 7.07(P=.001) | 2.04 | S.D. |
| X | 7.0 | 8.1 | 26 | 1.89 | 2.06 | N.S.D. |
| Y | 6.0 | 8.6 | 25 | 6.43(P=.001) | 2.06 | S.D. |
| P | 10.0 | 9.8 | 23 | 0.29 | 2.07 | N.S.D. |

Table 6

Group VI (TOLMAN, QUESTIONNAIRE ITEMS - 7, 17, 18, 28)

| Instructor Identification Number | Instructor's Mean ($\bar{M}$) | Students' Mean ($\bar{M}$) | df | Calculated + | Critical + | Significant Difference (S.D.) No Significant Difference (N.S.D.) |
|---|---|---|---|---|---|---|
| A | 5.0 | 7.7 | 33 | 4.46(P=.001) | 2.04 | S.D. |
| B | 5.0 | 9.2 | 25 | 5.54(P=.001) | 2.06 | S.D. |
| C | 4.0 | 8.0 | 49 | 7.63(P=.001) | 2.01 | S.D. |
| E | 9.0 | 7.9 | 58 | 2.35 | 2.00 | S.D. |
| G | 5.0 | 8.2 | 54 | 5.85(P=.001) | 2.01 | S.D. |
| J | 6.0 | 7.8 | 31 | 2.96(P=.001) | 2.04 | S.D. |
| M | 6.0 | 7.6 | 30 | 3.79(P=.001) | 2.04 | S.D. |
| X | 5.0 | 6.5 | 26 | 0.70 | 2.06 | N.S.D. |
| Y | 5.0 | 6.4 | 25 | 2.60 | 2.06 | S.D. |
| P | 5.0 | 5.8 | 23 | 1.60 | 2.07 | S.D. |

17.

Table 7

Group VII (MOWER, QUESTIONNAIRE ITEMS - 8, 9, 26, 27)

| Instructor Identification Number | Instructor's Mean ($\bar{M}$) | Students' Mean ($\bar{M}$) | df | Calculated + | Critical + | Significant Difference (S.D.) No Significant Difference (N.S.D.) |
|---|---|---|---|---|---|---|
| A | 7.0 | 9.4 | 33 | 5.19(P=.001) | 2.04 | S.D. |
| B | 6.0 | 9.4 | 25 | 4.85(P=.001) | 2.06 | S.D. |
| C | 5.0 | 8.3 | 49 | 8.40(P=.001) | 2.01 | S.D. |
| E | 7.0 | 8.3 | 58 | 3.27(P=.01) | 2.00 | S.D. |
| G | 8.0 | 8.9 | 54 | 1.97 | 2.01 | N.S.D. |
| J | 7.0 | 9.1 | 31 | 4.06(P=.001) | 2.04 | S.D. |
| M | 6.0 | 9.1 | 30 | 4.60(P=.001) | 2.04 | S.D. |
| X | 8.0 | 8.5 | 26 | 0.70 | 2.06 | N.S.D. |
| Y | 4.0 | 8.5 | 25 | 10.37(P=.001) | 2.06 | S.D. |
| P | 4.0 | 9.0 | 23 | 7.97(P=.001) | 2.07 | S.D. |

18.

Table 8

SUMMARY OF RESPONSES OF INDIVIDUAL INSTRUCTORS

| INSTRUCTOR A | Theorist Group | Instructor/Student Rating | Theorist Group | Student/Instructor Rating |
|---|---|---|---|---|
| Maximum Agreement: | I<br>IV<br>VI | 5.0/6.7 S.D.<br>5.0/10.0 S.D.<br>5:0/7.7 S.D. | I | 6.7/5 S.D. |
| Maximum Disagreement: | II | 10.0/9.8 N.S.D. | IV | 10.0/5.0 S.D. |
| INSTRUCTOR B | | | | |
| Maximum Agreement: | VI | 5.0/9.2 S.D. | I | 8.8/6.0 S.D. |
| Maximum Disagreement: | III<br>V | 9.0/10.0 N.S.D.<br>9.0/9.2 N.S.D. | III | 10.0/9.0 N.S.D. |
| INSTRUCTOR C | | | | |
| Maximum Agreement: | VI | 4.0/8.0 S.D. | I | 7.2/7.0 S.D. |
| Maximum Disagreement: | IV | 9.0/8.5 N.S.D. | II | 10.2/7.0 S.D. |

Table 8, (continued)

| | Theorist Group | Instructor/Student Rating | Theorist Group | Student/Instructor Rating |
|---|---|---|---|---|
| INSTRUCTOR E | | | | |
| Maximum Agreement: | II | 6.0/8.6 S.D. | I | 6.7/7.0 N.S.D. |
| Maximum Disagreement: | VI | 9.0/7.9 S.D. | V | 8.9/8.0 S.D. |
| INSTRUCTOR G | | | | |
| Maximum Agreement: | VI | 5.0/8.2 S.D. | I | 7.9/9.0 S.D. |
| Maximum Disagreement: | V | 14.0/10.7 S.D. | V | 10.7/14.0 S.D. |
| INSTRUCTOR J | | | | |
| Maximum Agreement: | I | 6.0/7.9 S.D. | VI | 7.8/6.0 S.D. |
| | VI | 6.0/7.8 S.D. | | |
| Maximum Disagreement: | IV | 11.0/8.2 S.D. | V | 9.2/10.0 N.S.D. |
| INSTRUCTOR M | | | | |
| Maximum Agreement: | I | 6.0/6.8 N.S.D. | I | 6.8/6.0 N.S.D. |
| | II | 6.0/8.5 S.D. | | |
| | IV | 6.0/8.7 S.D. | | |
| | V | 6.0/9.8 S.D. | | |
| | VI | 6.0/7.6 S.D. | | |
| | VII | 6.0/9.1 S.D. | | |
| Maximum Disagreement: | III | 8.0/8.3 N.S.D. | V | 9.8/6.0 S.D. |

20.

Table 8, (continued)

| INSTRUCTOR X | Theorist Group | Instructor/Student Rating | Theorist Group | Student/Instructor Rating |
|---|---|---|---|---|
| Maximum Agreement: | VI | 5.0/6.5 N.S.D. | III | 6.0/8.0 S.D. |
| Maximum Disagreement: | II | 8.0/8.1 N.S.D. | VII | 8.5/8.0 N.S.D. |
| | III | 8.0/6.0 S.D. | | |
| | IV | 8.0/8.0 N.S.D. | | |
| | VII | 8.0/8.5 N.S.D. | | |
| INSTRUCTOR Y | | | | |
| Maximum Agreement: | VII | 4.0/8.5 S.D. | III | 5.4/5.0 N.S.D. |
| Maximum Disagreement: | II | 11.0/8.6 S.D. | IV | 10.6/9.0 S.D. |
| INSTRUCTOR P | | | | |
| Maximum Agreement: | VII | 4.0/9.0 S.D. | VI | 5.8/5.0 S.D. |
| Maximum Disagreement: | IV | 10.0/9.8 N.S.D. | IV | 9.8/10.0 N.S.D. |
| | V | 10.0/9.8 N.S.D. | V | 9.8/10.0 N.S.D. |

In Table 1 observation revealed that instructor A was aligned with Pavlov's ideas but the students disagreed. (A highly significant difference P = .001 exists.) Whenever a significant difference exists, the null hypothesis must be rejected. Further, examination revealed that with the exception of Instructor G, all instructors indicated they occasionally applied the learning principles of Pavlov. In five of the ten classes these perceptions were agreed with by the students involved. Instructor G, who believed he seldomly used Pavlovian theories, was not in agreement with his students' perceptions of him. The difference of opinion between instructors A, B, J and P and their students are highly significant. These students perceived that they were receiving more Pavlovian treatment than the instructors believed they were applying.

Table 2 showed that significant differences in perceptions existed for all comparisons except instructor A and instructor X. Both these instructors believed they seldom applied Thorndike's principles, and their students agreed. With the exception of Instructors J and Y, all of the students perceived the instructor as having applied Thorndike's principles to a lesser degree than the instructor believed he was applying them. A significant difference exists in eight of the ten ratings. In six of the ten ratings the differences in ratings are highly significant. In all but one case (instructor Y), the students perceived the class room conduct of their instructors less "Thorndike-like" than the instructor perceived his own behavior.

Table 3 revealed two <u>five</u> and two <u>six</u> ratings. In two of these cases (instructors Y and P) the students agreed with their instructors in the application of Hull's theories. In the cases of instructors A and G, a highly significant difference of opinions existed. However, it should

be noted that in seven of the ten ratings no significant difference in ratings existed. There was a closer congruity of ratings for Hull than existed for any other selected learning theorist as indicated by the number of N.S.D. observed in relationship to this theorist's principles.

As indicated by Table 4, six of the ten instructors evaluated believed they seldom applied the learning theories of Skinner although a dichotomy existed with ratings varying from 5 to 11. Instructors A and M apparently felt they applied those principles frequently. However, a highly significant difference (P = .001) of opinion existed with respect to their students' ratings. In fact, highly significant differences in rating existed in five of the ten comparisons based on Skinnerian principles. The students' ratings were principally negative with no 4-6 values occurring.

Table 5 revealed that Guthrie received the most negative rating, a 14. Only two 6's were generated. The instructors' ratings suggested a lack of application of Guthrie's principles of learning, and the students agreed. In all but three ratings (G, J and P) the students perceived less application of these principles than the instructors' ratings indicate they intended to convey. In fifty percent (50%) of the ratings, differences are highly significant, with 4 of the 5 cases indicating students' perceptions of less application than that indicated by the instructor.

Table 6 illustrates a general agreement in rating totals among instructors. There was apparently (with the exception of instructor E) general support among the department members involved in the testing for Tolman's principles of learning. In all but one case the students' ratings significantly disagreed. In fact, in six cases (A, B, C, G. J, and M) the

differences were highly significant with students supporting a rating of "occasionally-applying" as compared to an instructor's rating of "frequently-applying".

Table 7 revealed agreement among instructors regarding the learning principles of Mower. No instructor rated himself as using Mower's principles less than occasionally with three rating them frequently. A highly significant difference in opinion was revealed by the students' ratings in eight of the ten sets. In the two instances where no significant difference existed, both the instructors and their students did not perceive the principles as being applied in their classrooms. In all cases where significant differences existed, the students perceived the learning principles of Mower as being applied less often than the instructor perceived himself as applying them.

Table 8 is a summary of responses of individual instructors. These scores were distilled, so that only maximum agreements (Indicating a high application of a selected learning theorist's principles) and maximum disagreements (indicating an infrequent use of the learning principles of a stated theorist) only have been reported. Because of a restricted data base (one score per instructor), ties resulted in the Instructor/-Student comparisons and were recorded as such.

Table 8 indicates that Instructor A apparently agreed most strongly with the principles of Pavlov (Group I), Skinner (Group IV), and Tolman (Group VI). A significant difference in perceptions between instructor and student existed in all cases with a highly significant difference in perceptions regarding Skinner (Group IV). The instructor's apparent lack of application of the principles selected from Thorndike's theories (Group II) was corbororated by his students. However, from the students'

point of view the practice of the learning theories of Skinner (Group IV) was the least appropriate. A highly significant difference existed since the instructor perceived himself as applying these principles frequently. But the students apparently seldomly recognized them.

Instructor B perceived himself as applying the theories of Skinner (Group IV) most often but the students disagreed. The students perceived the principles of Pavlov frequently. Both the students and Instructor B agreed that he does not apply the learning principles of Hull (Group III) and Guthrie (Group V).

Instructor C perceived himself as apparently favoring the learning principles of Tolman (Group VI), but his students significantly disagreed. The students believed he most often applied the theories of Pavlov (Group I). There was no significant difference with the degree of their assessment although Pavlov was not the instructor's perceived first-choice. Instructor C appeared to reject the principles of Skinner (Group IV), and his students agreed (No significant difference exists). The students indicate the least-used theorist was Thorndike (Group II), while the instructor's rating indicated he believed he occasionally used Thorndike's theories. (This is a highly significant difference P = .001).

Table 8 revealed the strongest alignment of Instructor E was with Thorndike. The students disagreed significantly and indicated they perceived the theories of Pavlov as being used most frequently. However, the instructor did not significantly disagree with their assessment. The table revealed the students perceived the application of Tolman's principles (Group VI) more than the instructor believed he was applying them (significant difference). The students indicated they were experiencing

the principles of Guthrie (Group V) less than the instructor perceived himself applying them (a significant difference).

A significant difference existed in all four areas of selection of Instructor G and his students. The instructor apparently believed himself supportive of the principles of Tolman (Group VI) while the students selected Pavlov. The instructor apparently believed he applied the theories of Guthrie (Group V) least; his students agreed, but a significant difference existed in the degree of the evaluation.

Instructor J showed an apparent close alliance with the theories of Pavlov (Group I) and Tolman (Group VI); his students agreed with his choice of Tolman (Group VI). He perceived he used Skinner (Group IV) least, but his students disagreed (significant difference). The students perceived that he used Guthrie (Group V) least, and the instructor agreed that he seldom used these principles (no significant difference).

Instructor M rated the theories of Pavlov (Group I), Thorndike (Group II), Skinner (Group IV), Guthrie (Group V), Tolman (Group VI) and Mower (Group VII) equally as having been used occasionally. The students disagreed significantly with his assessment except for the rating of Pavlov. There was not significant difference in their perceptions of the use of Hull's (Group III) theories. The students perceived the theories of Guthrie (Group V) as least applicable to this instructor's classroom conduct.

Instructor X agreed with his students' ratings more closely than any other. Tolman (Group VI) was the instructor's theorist of maximum agreement. The students perceived an application of Hull most frequently, a choice with which the instructor disagreed significantly. The instructor rated the principles of Thorndike (Group II), Hull (Group III), Skinner

(Group IV) and Mower (Group VII) as having been seldom used. The students agreed except in the choice of Hull (Group III) where a significant difference existed.

Instructor Y perceived himself as highly supportive of the principles of Mower; a highly significant difference in perceptions was indicated by his students. Both Instructor Y and his students agreed that he used the principles of Hull frequently. A significant degree of difference existed between the choice of least-used with the instructor rating Thorndike (Group II) as the least used and the students selecting Skinner (Group IV).

Instructor P and his students disagreed significantly in the principles used most often. A highly significant difference of opinion existed with the instructor's choice of Mower (Group VII). The students selected Tolman (Group VI) as the theorist most perceived. In principles of learning least applicable (Group IV & V), Instructor P and his students agreed (no significant differences existed).

## IMPLICATIONS AND RECOMMENDATIONS

The responses generated by the reactions to the questionnaire presented several interesting features. First, in most cases the students' ratings with respect to the learning theorists tended towards the central portion of the range, i.e., means of 7 to 9. Two possibilities have been recognized which may explain this phenomena: the students perhaps discriminated less well between the different principles presented in the questionnaire, and/or the differences in the numbers of individuals in the student groups compared to the single instructor rating tended to make the instructor's rating more polarized compared to the averaged ratings of numerous students. More experience with this questionnaire and more data should help add perspective to the evaluation of the means generated.

Secondly, it is noted that the instructors participating in this study demonstrated a strong alignment with the learning theories of Pavlov and Hull. Skinnerian theories generated a highly dichotomized picture with few instructors rating these theories in the mid-range. Apparently the participants viewed themselves as pro-Skinner or anti-Skinner in this sample. The students generally perceived less Skinnerian influence in the classroom than some of the instructors believed they were practicing (instructors A, B, E & Y, Table 4).

Thirdly, in reviewing the data from the student view point, it appeared that the students see themselves in a situation more analogous with Pavlov's famous dogs than with Skinner's subjects (Table 1 & 4). An interesting speculation developed from this observation; is it that the students have been manipulated so much under the Skinnerian influence that

they may not be able to recognize it as such, or is it that they feel themselves in the position of Pavlov's dogs being punished at every incorrect response?

Additional observations indicate that in all but one case Tolman practitioners were perceived differently by their students. A similar observation was observed in all but two cases for those instructors who believe themselves aligned closely with the theories of Thorndike and Mower.

Most instructor-support was aligned with the theories of Pavlov and Mower; student concurrence with these perceptions was demonstrated 50% of the time for Pavlov but only 20% of the time for Mower. In the latter case the student agreement with the instructor's rating did not occur with those instructors who most closely aligned themselves with Mower, but rather, the student concurred (no significant difference) with those instructors in the middle range. If the instructors were accurately evaluating their performance in the classroom, the explanation may be that Pavlovian principles were more easily recognized by the student while Mower's theories were more foreign or obscure.

The relatively high degree of disagreement between what the instructors believe they are doing and with what the students believe they were experiencing in the classroom situation may be explained by one or several of the following:

1. The instructor was not able to make a valid assessment of his actual classroom conduct with respect to the theorists involved in this study.

2. Following the repetition of the study, the data should be given to the instructors with their own identity code. They will then have the benefit of observing the simularities and differences between their perceptions of what they are doing in the classroom and those of their students.
3. Following Recommendation #2 and allowing several semesters for the cooperating instructors to modify their classroom conduct, a third administration of the questionnaire should be attempted. Data from this experiment will allow conclusions to be made as to whether or not the instructors were successful at applying the theories they believed they were utilizing.

FOOTNOTES

1. John Losak, Syllabus: Learning Theory and Applications. Fort Lauderdale: Nova University National Lecturers, 1974. 6.

2. Stephen Romine, "Perceptions of an Effective Community College Instructional Climate," The Journal of Higher Education, (June, 1974), 423

3. D. H. Naftulin, J. E. Ware, and F. A. Donnelly, "The Doctor Fox Lecture: A Paradigm of Educational Seduction", Journal of Medical Education, 48 (1973), 630-35.

4. Cecil A. Gibb, "Classroom Behavior of the cCollege Teacher," Educational and Psychological Measurement, 36 (Summer, 1974), 254-263.

5. Samuel T. Mayo, "Mastery Learning and Mastery Testing," NCME 1 (March, 1970), 1-4.

6. John Whooley, "Improving the Lecture," Improving College and University Teaching, (Summer, 1974), 183.

7. E. K. Beller, "Teacher Evaluation: Why, What, and How!" Classroom Research Journal, 2 (1965), 1-12.

8. H. V. Perkins, Classroom Behavior and Underachievement," American Educational Research Journal, 2 (1965), 1-12.

9. James H. Korn, "Promoting Good Teaching," The Journal of Higher Education, (February, 1972), 124.

10. UCLA Evaluation Comment, 1 (May, 1968), 1-11.

11. Stephen Romine, "Perception of an Effective College Instructional Climate," Journal of Higher Education, 47 (June, 1974), 415-429.

12. James Laurits, "Thoughts on the Evaluation of Teaching," Educational Horizons, (Spring 1975), 87-97.

13. K. J. Bean, and Robert E. Hovat, "Differences Among Teachers' and Students' Perceptions of Science Classroom Behaviors and Actual Classroom Behaviors," Science Education, 59 (July, 1975) 333-334.

14. George L. Geis, "Student Participation in Instruction: Student Choice," The Journal of Higher Education, (May-June 1976), 261.

15. Larry R. Vadervert, "Student Evaluation of Instruction: Some Theoretical Considerations and a Proposal," Eric Document ED093 394.

16. Boris Bali, "What Makes a Good Junior College Teacher?" Improving College and University Teaching, (Summer, 1975), 187.

17. Raymond P. Whitfield and Lawrence M. Brammer, "The Ills of College Teaching: Diagnosis and Perscription," The Journal of Higher Education, (Jaunary, 1973), 6.

18. Robert L. Bailey, "Factors in Modifying Instructional Programs," Improving College and University Teaching, (Summer, 1973) 207.

19. Herbert W. Marsh, et al "Validity and Usefulness of Student Evaluation of Instructional Quality," Journal of Educational Psychology, (1957), 47, 833-839.

20. M. T. Miller, "Instructor Attitudes toward, and their use of, Student Ratings of Teachers," Journal of Educational Psychology, (1971), 62, 235-239.

21. N. L. Gage, "A Method for Improving Teacher Behavior," Journal of Teacher Education, 14 (1963), 261-266.

22. M. T. Miller, op cit

23. Dr. Charles Dzuiban, Florida Technological University, College of Education, Orlando, Florida.

24. Ray C. Bryan, "Student Rating of Teachers," Improving College and University Teaching, (Summer, 1967), 200-204; Netusil, Anton J. and Daniel A. Hallenbeck, "Assessing Perceptions of College Student Satisfaction Questionnaire Manual. Ames, Iowa: Central Iowa Associates, Incorporated, 1971. Gibb, Cecil B. op. cit. Thomas R. Watruba and Penny L. Wright. "How to Develop a Teacher Rating Instrument." J.H.E., 44 (November/December, 1975), 653-663.

25. Morris L. Bigge. Learning Theories for Teachers. New York: Harper and Row, 1964. B. R. Bugelski. The Theory of Learning Applied to Teaching. New York: The Bobbs-Merrill Company, Incorporated, 1964. Ernest R. Hilgard and Gordon H. Bower. Theories of Learning Englewood Cliffs, New Jersey: Prentice-Hall, Incorporated, 1975.

BIBLIOGRAPHY

Bailey, Tobert L. "Factors in Modifying Instructional Programs." Improving College and University Teaching. (Summer, 1973), 207.

Bali, Jr., Boris. "What Makes A Good College Teacher?" Improving College and University Teaching. (Summer, 1975), 187.

Barr, A.S. "Teacher Effectiveness and Its Correlates." Journal of Experimental Education, 30 (September, 1961) 134-52.

Beam, K. J. and Robert E. Hovart. "Differences Among Teachers' and Students; Perceptions of Science Classroom Behaviors, and Actual Classroom Behaviors." Science Education 59 (July, 1975, 125-26, 333-344.

Beller, E. K. "Teacher Evaluation: Why, What, and How!" Classroom Research Journal, 2 (1965), 1-12.

Bigge, Morris L. Learning Theories for Teachers. New York: Harper & Row, 1964.

Bridges, C.M. et al. "Characteristics of Best and Worst College Teachers." Science Education, 55, (October, 1971), 545-553.

Bruner, Jerome S. The Process of Education. Cambridge, Massachuseets: Harvard University Press, 1960, 17.

Bryan, Ray C. "Student Rating of Teachers." Improving College and University Teaching, (Summer, 1967), 200-204.

Bugelski, B. R. The Theory of Learning Applied to Teaching. New York: The Babbs-Merrill Co., Incorporated, 1964.

Costin, Frank, et al "Student Ratings of College Teaching : Realibility, Validity, and Usefulness." Review of Educational Research, 41 (1971), 511-535.

de Bruin, H. E. "Personality Concepts in Relation to Quality Teaching." Education, 89 (February, 1969), 241-43.

Drummond, Robert J. and Frank T. Vitro. "Learning Research and Principles as Applied to Classroom Teaching." (1974) Eric Document Ed 114 454.

Gage, N.L. "A Method for Improving Teacher Behavior." Journal of Teacher Education, 14 (1963), 261-66.

Geis, George L. "Student Participation in Instruction: Student Choice." The Journal of Higher Education, (May-June, 1976), 261.

Gibb, Cecil A. "Classroom Behaivor of the College Teacher." Educational and Psychological Measurement. (Summer, 1975) 254-263.

Harvey, J. N. and D. G. Baker. "Student Evaluation of Teaching Effectiveness." Improving College and University Teaching, 18 (Autumn, 1970), 275-278.

Hilgard, Ernest R. and Gordon H. Bower. Theories of Learning. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1975.

Kilgo, Reese D. "What The Good Teacher Does." Improving College and University Teaching, 18, (Autumn, 1970), 251-253.

Kneisel, Paul R. "Inventory Questionnaires Can Facilitate Individualization." Improving College and University Teaching, 22 (Summer, 1974), 175-176.

Korn, James H. "Promoting Good Teaching." The Journal of Higher Education, (February, 1972), 124.

Laurits, James. "Thoughts on the Evaluation of Teaching." Educational Horizons, (Spring, 1975), 87-97.

Losak, John. Syllabus: Learning Theory and Applications. Fort Lauderdale: Nova University National Lecturers, 1974, 6.

Mager, Robert. Developing Attitude Toward Learning. Belmont, California: Lear Siegler, Inc./Fearon Publishers, 1974. 7-8.

Marsh, Herbert W., et al. "Validity and Usefulness of Student Evaluation of Instructional Quality." Journal of Educational Psychology, 47 (1974), 833-839.

Mayo, Samuel T. "Mastery Learning and Mastery Testing." NCME, 1 (March, 1970), 1-4.

McDaniel, E. and L. Ravetz. "Students' Perceptions of College Instruction." Improving College and University Teaching, 19, (Summer, 1971), 217-218.

Millar, John J. "Two Aspects of the Teaching Learning Process." Improving College and University Teaching, (April, 1975), 118.

Miller, M.T. "Instructor Attitudes Toward, and Their Use of, Student Ratings of Teachers." Journal of Education Psychology, 62, (1971). 235-239.

Naftulin, D. H., J. E. Ware, Jr., and F. A. Donnelly. "The Doctor Fox Lecture: A Paradigm of Educational Seduction." Journal of Medical Education, 48 (1973), 630-635.

Romine, Stephen. "Perceptions of An Effective Community College Instructional Climate." Journal of Higher Education. 47 (June, 1974), 415-429.

Ryans, David G. "Teacher Behavior Can Be Evaluated." The Evaluation of Teaching, Washington, D.C.: Pi Lambda Theta, 1967. 43-64.

Tuckerman, B. W. and Oliver, W. F. "Effectiveness of Feedback to Teachers as a Function of Source." Journal of Educational Psychology. 59 (1968), 297-301.

UCLA Evaluation Comment. 1 (May, 1968), 1-11.

Vandervert, Larry R., "Student Evaluation of Instruction: Some Theoretical Considerations and a Proposal." (March, 1974). Eric Document ED 093 394.

Watruba, Thomas R. and Penny L. Wright. "How to Develop a Teacher Rating Instrument." Journal of Higher Education, 47 (December, 1975), 653-663.

Whitfield, Raymond P. and Lawrence M. Brammer. "The Ills of College Teaching: Diagnosis and Prescription." The Journal of Higher Education, (January, 1973), 6.

Wooley, John. "Improving the Lecture." Improving College and University Teaching. (Summer, 1974) 183.

# APPENDIX

*APPENDIX A*

## DEVELOPMENT OF THE QUESTIONNAIRE

Literature involving development of questionnaires and invovling the use of questionnaires was researched. No questionnaires relating directly to this practicum were found but a study of the use of questionnaires by other authors was helpful.[24]

Several texts were researched for principles of learning as developed by several learning theorists.[25] Seven learning theorists were chosen (Pavlov, Thorndike, Hull, Skinner, Guthrie, Tolman, and Mouer) and five learning principles from each were selected for consideration. After some study, the number of principles representing each theorist was reduced to four giving a total of twenty-eight (28) questionnaire items. Statements which represented application of each principle of theory selected for use were written. These were submitted to two psychology instructors at Valencia Community College to determine if the statements fairly represented the theories. The statements were reworded as necessary and put into questionnaire format.

The questionnaire was administered to students in four classes. Three of these classes were political science classes taught by two instructors; the other was an English class taught by a third instructor. As the students completed the questionnaire, they were asked to identify items that were unclear, terms that caused confusion, and other problems encountered.

Adjustments were made in the questionnaire. It was then given to two political science classes to determine whether further adjustments should be made.

The selected items relating to the principles of learning and the theorists are listed in appendix (C). The sequence of questions in the questionnaire has been scrambled. The ratings by the instructor are based on a scale of one to five (1 - 5). See the questionnaire in appendix (B) for the rating scale and questionaire items.

## APPENDIX B

React to the statements using this rating scale.

### Rating Scale

This statement is frequently true of this instructor's conduct of this class. . . . . .Mark A

This statement is Occasionally true of this instructor's conduct of this class. . . . . .Mark B

This statement is seldom true of this instructor's conduct of this class . . . . . .Mark C

This statement is never true of this instructor's conduct of this class . . . . . .Mark D

No Opinion . . . . . .Mark E

### QUESTIONNAIRE

The following statements are intended to help you understand why you are being asked to respond to this questionnaire. Please read carefully then complete the questionnaire.

There are many theories about how people learn. Not all of these theories are in agreement. Your instructor has an set of principles by which he believes you learn. As a result of the principles of one theory or several theories selected by your instructor, he does things in class by which he believes he is making it easier for you to learn.

It is possible that the things the instructor thinks are being done to help you learn are not being recognized by you. It will be very helpful for your instructor, for you, and for future classes for the instructor to know whether you view what the instructor does in class in the same way that your instructor does. If your instructor believes he is doing one thing and you believe something different is going on, the instructor will benefit from knowing this. Do not make moral judgments about these statements. There is no right or wrong action by an instructor or a right or wrong answer from you. Please remember that your are not evaluating your instructor, but you are relaying some information to him which can improve classroom instruction.

Using the scale listed below and on each page, rate your perceptions of your instructor's behavior in this class.

Thank you for helping secure some useful information which can help in improving instruction for you and other students.

React to the statements using this rating scale.

Rating Scale

This statement is frequently true of this instructor's conduct of this class. . . . . .Mark A

This statement is Occasionally true of this instructor's conduct of this class. . . . . .Mark B

This statement is seldom true of this instructor's conduct of this class . . . . . .Mark C

This statement is never true of this instructor's conduct of this class . . . . . .Mark D

No Opinion . . . . . .Mark E

1. The instructor conducts this class so that the students like the course material being taught.

2. Whenever the students respond to a question as the instructor desires, this instructor behaves in a way that encourages the students to continue responding to future questions.

3. In this class, the instructor sets up situations which force students to respond with correct answers.

4. When learning does not take place immediately, this instructor continues, confident that the class will understand and learn when the proper learning siutation has been established in this classroom.

5. When the students in the class do not get a point quickly, this instructor's actions lead me to conclude that he is not discouraged as he continues to try to get the class to learn.

6. In teaching an idea or concept, this instructor plans class activities so that the most important point the class is to learn is taught last.

7. From the actions of the instructor in this class, I conclude that the instructor believes students can learn by being told about and/or shown material they are to learn.

8. If this instructor wishes the students in this class to think and/or respond in a different manner from the way they are responding, he behaves in such a way that students sense the instructor's rejection and begin thinking and responding differently.

9. The instructor uses ideas or concepts learned earlier in this or in another class to help students in this classroom learn new information he wishes to teach.

10. The instructor uses illustrations which agree with the idea being stressed that this instructor wishes the class to learn.

11. This instructor responds in a way that lets the students know he is pleased with the class's progress, only after responses are given which the instructor desires the students to make.

React to the statements using this rating scale.

Rating Scale

This statement is frequently true of this instructor's conduct of this class. . . . . .Mark A

This statement is Occasionally true of this instructor's conduct of this class. . . . . .Mark B

This statement is seldom true of this instructor's conduct of this class . . . . . .Mark C

This statement is never true of this instructor's conduct of this class . . . . . .Mark D

No Opinion . . . . . .Mark E

12. This instructor interrupts students' comments or responses he does not wish to encourage.

13. This instructor clearly presents reasons for learning the information presented for study in this class.

14. This instructor keeps giving examples and asking questions until someone in the class answers correctly.

15. If something is going on in class that will interfere with students learning, the instructor behaves in such a way that the interference ceases.

16. Assignments in this class are broken down into their smallest parts, then these parts are taught.

17. The actions or statements of this instructor in this class leads me to conclude that he believes important things are being learned in addition to the learning that shows up on tests.

18. When students fail to learn the information stressed in this class, the instructor looks for reasons for the learning failure and plans so that desired learning will occur in the future.

19. When teaching new information, this instructor uses illustrations relating to past learning if the new illustrations are closely related to the previous learning.

20. This instructor sets up the classroom and the class so that learning can occur, but the learning is left strictly up to the learner.

21. The instructor uses a variety of techniques and methods of presentation with this class.

22. When the students in this class fail to learn what the instructor wishes them to learn, the instructor accepts the responsibility for the lack of learning.

23. In discussion in this class, the instructor allows students to move to a new topic only after a correct answer is given to a previous question.

React to the statements using this rating scale.

Rating Scale

This statement is frequently true of this instructor's conduct of this class. . . . . .Mark A

This statement is Occasionally true of this instructor's conduct of this class. . . . . .Mark B

This statement is seldom true of this instructor's conduct of this class . . . . . .Mark C

This statement is never true of this instructor's conduct of this class . . . . . .Mark D

No Opinion . . . . . .Mark E

24. In conducting this class, the behavior of the instructor makes the students aware that they are on the right path after each desired response so that they continue to develop ideas and continue responding.

25. In activities and on assignments and tests in this class both the questions asked and the answers sought are clear.

26. The instructor's behavior in this class leads me to conclude that he believes students are learning when they are sitting, looking, and listening.

27. In this class when students give correct answers to the instructors questions, this instructor responds immediately in such a way that the class is encouraged to continue the discussion.

28. From words or actions by the instructor in this class, I conclude this instructor believes students learn far more than a test indicates.

Dear Collegue,

Here are the questionnaires I spoke about at our department meeting in June before III B started. Your envelope with your identification letter is in the envelope. I am not able to identify you or your class. I do not desire to do so.

The following steps are listed to facilitate carrying out this project:

1. Have your students use pencils to blacken the space of their answer choice according to their observations in your class.

2. Assure students that this is not an evaluation of you in any way. Also urge them not to make moral judgments as to whether they think the statement is either true or false or good or bad. Urge them not to try to "second-guess" the right or wrong response as no right or wrong response is possible. This is especially important.

3. Social Security number of each student should be filled in the upper right hand corner of the IBM answer sheet so that the computor will have an identity for grouping responses. They should mark your identification letter in the space provided for their name.

4. You are asked to complete a questionnaire using the answer sheet marked by a star in the upper left hand corner. Use your identification letter in the space on the IBM answer sheet for the name. Place your "answer sheet" on top of those belonging to your students.

5. When you answer the questionnaire, shift your thinking so that you are responding to the rating scale and each item as you perceive your actions in your classes.

6. Please give the questionnaire to two (2) of your classes. For the time being, place a rubber band (see envelope) around each class thus keeping them separated.

7. Place the questionaires and your completed IBM sheets in a brown envelope; return them to my mail box. Do not put your name on the envelope. I will greatly appreciate your returning these to me by July 21st.

8. The broad picture is what I wish to look at. You will be informed about findings. You will receive a copy of the questionnaire for your own use with your classes if you desire to do so. Perhaps a set of questionaires can be put on file in the office so you can use them if you wish to use them. Thank you sincerely for your assistance. I do appreciate your cooperation.

NB:rmsWa

APPENDIX D

Learning Theory Item Numbers by Theorists

| | | |
|---|---|---|
| Pavlo | - | 1, 3, 10, 19 |
| Thorndike | - | 2, 11, 12, 20 |
| Hull | - | 4, 13, 14, 21 |
| Skinner | - | 5, 15, 22, 24 |
| Guthrie | - | 6, 16, 23, 25 |
| Tolman | - | 7, 17, 18, 28 |
| Mower | - | 8, 9, 26, 27 |

UNIVERSITY OF CALIF.
LOS ANGELES

DEC 2 1977

CLEARINGHOUSE FOR
JUNIOR COLLEGES